

Claims

What is claimed is:

- 5 1. A method, comprising:
 - matching an input image with one of a plurality of states, the input image determined from a signal comprising images from a plurality of cameras; and
 - assigning the input image to one of the states when the
 - 10 input image matches the one state.
2. The method of claim 1, wherein:
 - the method further comprises the steps of:
 - determining an input image from the signal comprising images from a plurality of cameras; and
 - determining input image information from the input image;
 - the step of matching further comprises the step of comparing the input image information with state image information corresponding to each of at least one states; and
 - the step of assigning further comprises the step of assigning the input image to one of the states when the input image information matches state image information of the one state.
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3. The method of claim 2, wherein:
 - the step of comparing comprises the steps of:
 - determining if at least one state exists; and
 - adding a new state that corresponds to the
 - 30 input image when at least one state does not exist; and
 - the step of assigning comprises the step of:
 - assigning the input image to the new state.

4. The method of claim 2, wherein:
the step of comparing comprises the step of:
when the input image information does not
match any of the information for each of the at least
one states, adding a new state that corresponds to the
input image; and
the step of assigning comprises the step of:
assigning the input image to the new state.
5. The method of claim 2, wherein the at least one state
comprises a plurality of states and wherein the method further
comprises the step of performing training to determine the
plurality of states.
6. The method of claim 2, further comprising the step of
outputting the input image, the input image output as being
associated with the one state.
7. The method of claim 2, wherein the images on the signal
are determined asynchronously.
8. The method of claim 7, further comprising the step of
multiplexing the images onto the signal, the step of multiplexing
performed wherein a sequence of switching between cameras is not
predetermined.
9. The method of claim 2, wherein the images on the signal
are determined synchronously.
10. The method of claim 2, further comprising the steps of:
outputting the input image, the step of outputting
associating the input image with the one state;

determining if an event is occurring on the input image, the step of determining comparing previous images associated with the one state with a present image.

5 11. The method of claim 2, wherein the input image information matches state image information of the one state when a metric comparing the input image information and the state image information of the one state falls within a predetermined value.

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12. The method of claim 2, wherein:

the step of determining input image information from the input image comprises the step of determining a histogram from the input image;

the step of comparing comprises the step of comparing the histogram of the input image with histograms corresponding to each of at least one states; and

the step of assigning comprises the step of assigning the input image to one of the states when the histogram of the input image matches the histogram of the one state within a predetermined error.

13. The method of claim 2, wherein:

25 the step of determining input image information from the input image comprises the step of determining a plurality of features from the input image;

the step of comparing comprises the step of comparing the features of the input image with each of a plurality of features corresponding to the at least one states; and

30 the step of assigning comprises the step of assigning the input image to one of the states when the features of the input image match the features of the one state within a predetermined error.

14. The method of claim 13, wherein each of the states comprises a state of a Hidden Markov Model (HMM).

5 15. A system comprising:

a memory that stores computer readable code; and
a processor operatively coupled to said memory, said processor configured to implement said computer readable code, said computer readable code configured to:

10 determine an input image from a signal comprising images from a plurality of cameras;

determine input image information from the input image;

compare the input image information with state image information corresponding to each of at least one states; and

15 assign the input image to one of the states when the input image information matches state image information of the one state.

16. An article of manufacture comprising:

a computer readable medium having computer readable program code means embodied thereon, said computer readable program code means comprising:

a step to determine an input image from a signal comprising images from a plurality of cameras;

25 a step to determine input image information from the input image;

a step to compare the input image information with state image information corresponding to each of at least one states; and

30 a step to assign the input image to one of the states when the input image information matches state image information of the one state.